

Appl. No. 10/814,649
Amendment dated February 23, 2006
Reply to Office Action mailed November 23, 2005

AMENDMENTS TO THE CLAIMS:

Claims 1 - 9 (Cancelled)

10. (Currently Amended) A method for determining the position of an object in a system

comprising a sensor arranged at a determinable location, the method comprising:

obtaining a time of arrival for a signal received at the sensor ~~wherein the time of arrival is obtained from a signal reflected from the object;~~

calculating a slant range from the object to the sensor based, at least in part, upon the obtained time of arrival;

wherein calculating the slant range further comprises:

adding a known distribution of noise to the time of arrival; prior to calculating the slant range; and

determining a position vector based, at least in part, upon the calculated slant range and the location of the sensor.

11. (Original) The method of claim 10 wherein the time of arrival is obtained from a signal transmitted from the object.

12. (Original) The method of claim 10 wherein the time of arrival is obtained from a signal reflected from the object.

13. (Cancelled).

14. (Original) The method of claim [13] 10 wherein the known distribution of noise comprises a Gaussian noise distribution with a variance of σ^2 .

15. (Original) The method of claim 10 wherein determining a position vector further comprises:
calculating an error norm for each possible position vector solution; and

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selecting as the object position vector the position vector solution with the smallest error
norm.

Claims 16-19. (Cancelled)